

## ABSTRACT

Serum-associated hypergastrinemia is treated by administration of gastrin active or passive immunization. An anti-gastrin immunogenic composition containing a gastrin G17 or G34 peptide fragment which is amino acid spacer-linked to an immunogenic carrier, is administered so as to effectively neutralize the circulating gastrin hormone, and moreover, inhibit autocrine activity by progastrin such as Gly-extended G17, and amidated G17, in patients with pernicious anemia. Moreover, the method includes administration of a therapeutically effective amount of anti-G17 or anti-G34 antibodies which may be in humanized form. Finally, the method provides ameliorating treatment of hypergastrinemic effects of proton pump inhibitors or H<sub>2</sub> histamine receptor blocking agents or antagonists, in addition to treatment of hypergastrinemia caused by diseases such as pernicious anemia.